

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 2, lines 16-23 with the following amended paragraph:

According to the method, a determination is first made as to whether a communications port has been enabled for utilization with a BIOS-provided console redirection feature. Such a feature is typically enabled by a user through the use of a BIOS-provided setup facility. Details regarding the configuration of the console redirection feature, such as whether the feature is enabled and the particular communications port on which the feature should be ~~enable~~ enabled, are typically stored in a non-volatile memory. Accordingly, determining whether a communications port has been enabled for utilization with a BIOS-provided console redirection feature may include reading configuration data stored in a non-volatile memory device to determine whether a communications port has been enabled for utilization with BIOS-provided console redirection.

Please replace the paragraph on page 3, lines 12-22 with the following amended paragraph:

In order to determine whether a device is connected to the communications port that is incompatible with console redirection, the communications port may first be enabled for communication. Data may then be transmitted on the communications port. A determination may then be made as to whether a receive buffer of the communications port contains data. This will be the case, for instance, when a ~~non-universal~~ non-universal asynchronous receiver transmitter (“non-UART”) device is connected to the communications port. If the BIOS determines that data is contained in the receive buffer, then a device is connected to the communications port that is incompatible with console redirection. Accordingly, in such a case the BIOS will disable the console redirection feature. Otherwise, the BIOS-provided console redirection feature is enabled for operation.

Please replace the paragraph on page 4, lines 14-16 with the following amended paragraph:

FIGURE 2 is computer architecture diagram that ~~that~~ illustrates the various components of a server computer utilized in the embodiments of the invention; and

Please replace the paragraph on page 5, line 24 through page 6, line 6 with the following amended paragraph:

According to embodiments of the invention, the terminal emulation program 108 is operative to emulate a terminal that is compatible with the VT-100 terminal protocol developed by DIGITAL EQUIPMENT CORPORATION. The terminal emulation program 108 may also be operative to emulate other types of terminal protocols from other manufacturers and specified by other standards bodies. For instance, according to embodiments of the invention, the terminal emulation program 108 may be capable of supporting the ANSI standard for communicating ANSI standard text data with remote computers over a network. Of course, it will be appreciated that the terminal emulation program ~~204~~ 108 may emulate other terminals. According to embodiments of the invention, the terminal emulation program may comprise the HYPERTERMINAL program from MICROSOFT CORPORATION of Redmond, Washington, or the MINICOM terminal emulation package for computers based on the LINUX operating system.

Please replace the paragraphs on page 7, lines 8-29 with the following amended paragraphs:

Turning now to FIGURE 2, an illustrative computer architecture for a server computer 104 utilized in the various embodiments of the invention will be described. The computer architecture shown in FIGURE 2 illustrates a conventional server computer, including a CPU 202, a system memory 204, including a RAM 206, an EEPROM 208 and a CMOS memory 210, and a system bus 212 that couples the memory to the CPU 202. A BIOS 214 containing the basic routines that help to transfer information between elements within the computer, such as during startup, is stored in the EEPROM 208. The BIOS 214 is executed by the CPU 202 when the server computer 104 is powered on.

The BIOS 214 performs a number of functions at startup of the server computer 104, including discovering and initializing the RAM 206, copying the contents of the BIOS 214 to the RAM 206, executing the BIOS 214 to perform a power on self-test ("POST") routine, and to pass control of the server computer 104 to an operating system 216. Once the operating system

216 has been loaded, aspects of the BIOS 214 may be utilized to manage data flow between the operating system 216 and devices attached to the server computer 104, such as a mass storage device 218, a video display adapter 220, a keyboard controller 228, a mouse and a printer. The CMOS memory 210 is a battery-backed memory device that is used by the BIOS 214 to store setting information for the server computer 104, including information regarding whether a console redirection facility has been enabled and, if so, the communication port to which the console should be redirected. This information is typically specified by a user through the use of a BIOS setup menu provided by the BIOS 214 and accessible at boot time.

Please replace the paragraph on page 8, lines 1-26 with the following amended paragraph:

As known to those skilled in the art, the BIOS 214 is an integral part of the server computer 104 and is typically shipped with the server computer 104 from the manufacturer. The BIOS 214 is made accessible to the CPU 202 on an EEPROM device 208. When the server computer 104 ~~computer 104~~ is powered on, the CPU 202 passes control to the BIOS 214, which is always located at the same place in the memory architecture of the server computer 104. By utilizing the BIOS 214, the operating system 216 and the applications that it executes are freed from having to understand exact details, such as hardware addresses, about input/output devices attached to the server computer 104.

As described in greater detail herein, the BIOS 214 includes program code for redirecting screen displays of the server computer 104 to remote terminal via a serial communications port. In particular, the BIOS 214 also includes a redirection module 222 which is an executable program module containing program code for redirecting video text data from the server computer 104 to the client computer 102, or other type of terminal. In order to redirect video text data and providing other type of serial communications, the server computer 104 includes one or more universal asynchronous receiver/ transmitters (“UART”) 230A-230B. The UARTs 230A-230B provide the hardware necessary for serial communications.

According to one embodiment of the invention, the redirection module 222 is stored in the EEPROM 208 in a compressed format. When the redirection module 222 is enabled for operation, the BIOS 214 uncompresses the redirection module 222 to the RAM 206. The

uncompressed redirection code may then be executed. As will be described in greater detail below, if a device is detected on the communications port for which console redirection is enabled, the BIOS 214 will not decompress or execute the redirection module 222. Additional details regarding the operation of the console redirection module 222 will be described in greater detail below with respect to FIGURE 3.

Please replace the paragraph on page 9, lines 16-25 with the following amended paragraph:

According to various embodiments of the invention, the server computer 104 may operate in a networked environment using logical connections to remote computers through a network 224, such as the Internet. The server computer 104 may connect to the network 224 through a network interface unit 226 connected to the bus 212. It should be appreciated that the network interface unit 226 may also be utilized to connect to other types of networks and remote computer systems. The server computer 104 may also include a keyboard controller 228 for receiving input from a keyboard and a video display adapter 220 for providing output to a display screen. In the various embodiments of the invention described herein, it is not necessary for a keyboard or a display screen to be connected to the server computer 104.

Please replace the paragraphs on page 11, line 23 through page 12, line 3 with the following amended paragraph:

If, at decision operation 312, the BIOS 214 determines that data was received, the routine 300 branches to operation 314. At operation 314, the BIOS 214 disables the console redirection facility. In particular, the BIOS 214 does not decompress the compressed redirection module 222 stored in the EEPROM 208. The BIOS 214 also does not execute the redirection code or perform any other redirection processing, despite the fact that the BIOS console redirection facility has been enabled by a user. Another such determination will be made on each subsequent boot of the server computer 104 in order to enable the redirection facility should the incompatible device be removed and an appropriate UART cable is connected. From operation 314, the routine 300 continues to operation 320, where the BIOS 214 continues the initialization and POST processes.